

# US HEALTH CORE COVENANT



# US HEALTH – UNIT 1

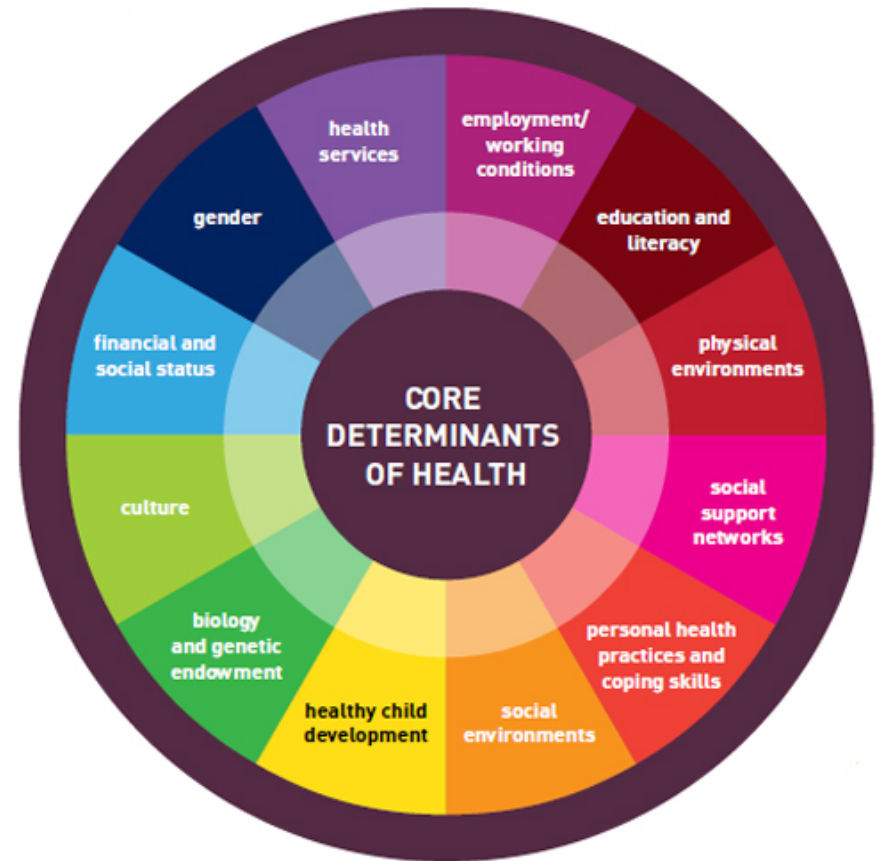
## NUTRITION & EXERCISE





# Key Factors Affecting Your Health?

- **SLEEP (qual. & quant.)**
- **NUTRITION/DIET**
- **EXERCISE**
- **HELP & SUPPORT**
- **STRESS**
- **LOVE FOR ONESELF**
- **LOVE FOR OTHERS**



# Key Factors Affecting Your Health?

- Historically, health was been perceived through the lens of medicine and biology
- There has been a recent transition to a new interpretation of public health concerned with the:
  - Social elements
  - Cultural elements
  - Economic elements
- In fact, there are many elements which have the ability to determine the likelihood of us becoming ill or not. There are in fact many, many factors, that influence our health on a day-to-day basis.



# Key Factors Affecting Your Health?

- Social elements
  - Do you eat alone or with company?
  - Do you eat at a table or on the go?
  - Do you cook or do takeout?
  - Do you work in an office or in the field?
  - Do you eat when you are hungry or are you an emotional eater?
- Cultural elements
  - Does fried food form a large part of your diet culturally?
  - Does corn or flour
  - Are you American or European?
- Economic elements
  - Economy – can you afford to eat/cook a healthy meal?
  - Is fast food your most affordable option?
  - Do you have access to vegetables and fruit?
  - Do you live in the suburbs or inner city?

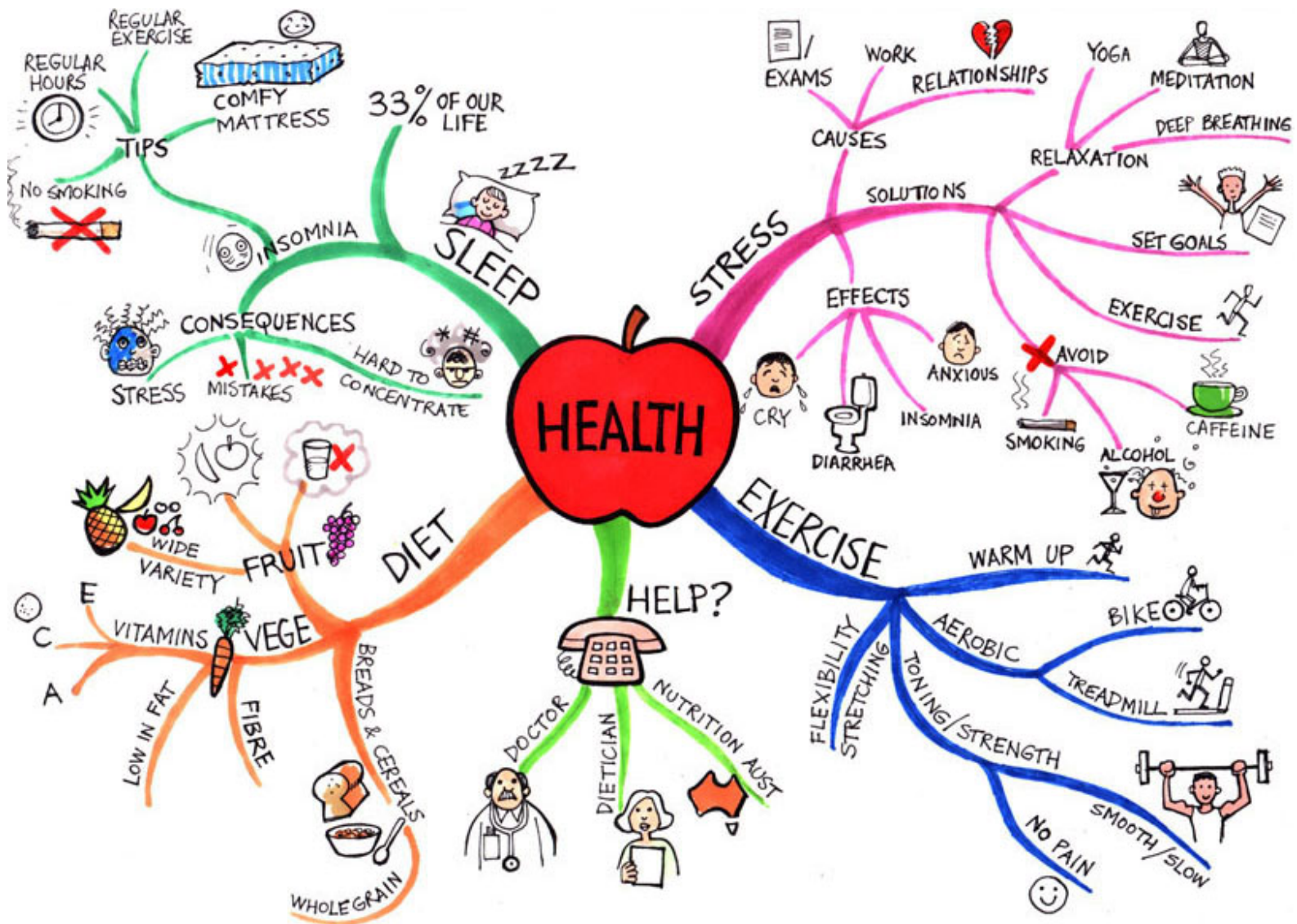
# HEALTH MAP

- If you had to create a health map? What would it look like?
- What would be on it?

## DO NOW

- Draw a map of your health, using the key factors.

# HEALTH MAP





# OUR FOCUS IN THIS CHAPTER

- **NUTRITION:**

- The study of food at work in our bodies, our source for energy, and the medium for which our nutrients can function. Think of nutrition as the building blocks of life.
- <http://whatisnutritiontips.com/>

- **EXERCISE:**

- Exercise is physical activity. In simple terms exercise is any movement that works your body at a greater intensity than your usual level of daily activity.
- Exercise raises your heart rate and works your muscles and is most commonly undertaken to achieve the aim of physical fitness.

# WHY IS **NUTRITION** IMPORTANT?

<http://www.tuftsmedicarepreferred.org/healthy-living/expert-knowledge/importance-good-nutrition>

Most people know good nutrition and physical activity can help maintain a healthy weight. But the benefits of good nutrition go beyond weight. Good nutrition can help:

- Reduce the risk of some diseases, including heart disease, diabetes, stroke, some cancers, and osteoporosis
- Reduce high blood pressure
- Lower high cholesterol
- Improve your well-being
- Improve your ability to fight off illness
- Improve your ability to recover from illness or injury
- Increase your energy level

# NUTRITION

LET US TEST YOUR NUTRITION IQ!



# FIVE FOOD GROUPS

What are the five food groups?

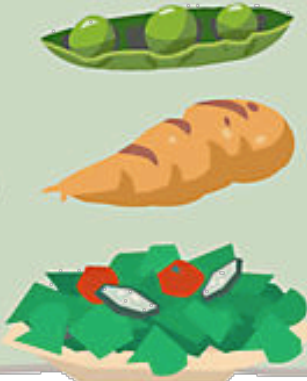
- Grains
- Vegetables
- Fruits
- Protein
- Dairy



# FIVE FOOD GROUPS

## Vegetables (pick 2)

lettuce  
broccoli  
corn  
potatoes  
carrots  
peas



## Protein (pick 1)

beans  
eggs  
beef  
ham  
nuts  
seeds



## Fruits (pick 1)

apples  
bananas  
pears  
berries  
melons  
peaches



## Grains (pick 2)

bread  
cereal  
oatmeal  
rice  
tortillas  
pasta



## Dairy (pick 1)

milk  
cheese  
yogurt



# FIVE FOOD GROUPS

## My Health IS My Responsibility

### 5 Food Group Tracking Placemat

Name \_\_\_\_\_

Date \_\_\_\_\_

#### Vegetable

- 5 Fresh Vegetables / Salad
- 4 Frozen Vegetables, Sweet Potatoes
- 3 Canned Vegetables
- 2 White Potatoes
- 0 Avoid French Fries/Tators

#### Fruit

- 5 Fresh Fruit
- 4 Packaged / Dried Fruit
- 3 Canned Fruit
- 2 Fruit Juice
- 0 Avoid Fruit Pop/Pie

#### Dairy

- 5 Fat Free Milk, Yogurt, Cheese
- 4 1% Milk, Yogurt, Cheese
- 3 2% Milk, Yogurt, Cheese
- 0 Avoid Full Fat Products

#### Grain

- 5 Whole Grain Breads, Tortillas, Crackers
- 5 Brown Rice, Corn/Peas, Whole Wheat Pasta
- 2 White Pasta, White Rice, White Tortilla
- 0 Avoid White Bread, Cookies, Cakes

#### Protein

- 5 Baked / Broiled Fish, Turkey/Chicken, Eggs
- 3 Beans, Nuts, Seeds, Nut Butters
- 2 Beef, Ground Beef, Ham
- 0 Avoid Corn Dogs and Hot Dogs

#### Stars

- 5 Gold - 5 stars
- 4 Green - 4 stars
- 3 Blue - 3 Stars
- 2 Red - 2 Stars
- 0 Grey - 0 Stars
- Total

Instructions: On the back of this placemat, you will find areas to record how many of each food group you eat each day. You can place up to 3 stars in each area. You can color in the stars using non-toxic, washable crayons or non-toxic, washable markers. Use the guide shown here to see what colors your stars should be.



# EXERCISE



# **EXERCISE** DOES THE BODY GOOD!

Exercise is important to ensure that your body is strong and healthy enough meet the challenges that you set for it.

- Exercise has a multitude of positive effects on your body, including:
  - Improved heart and lung efficiency, reducing your chances of developing heart disease.
  - Increased metabolic function, enabling you to maintain a healthy weight.
  - Strong joints and muscles, so you can meet the demands of daily life.
  - Maintenance of posture and flexibility, to keep you walking tall.
  - Production of endorphins in your brain, promoting a sense of well being.
  - There is also research emerging that indicates that exercise can increase brain function.

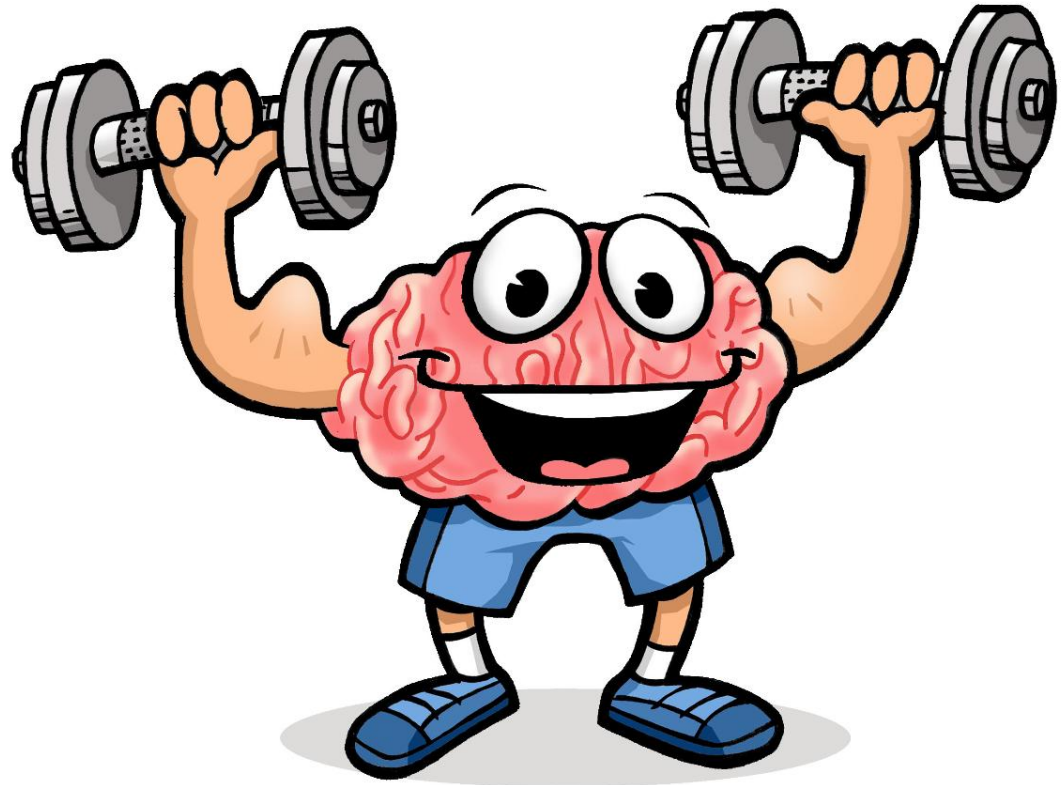
# FIVE KINDS OF **EXERCISE**





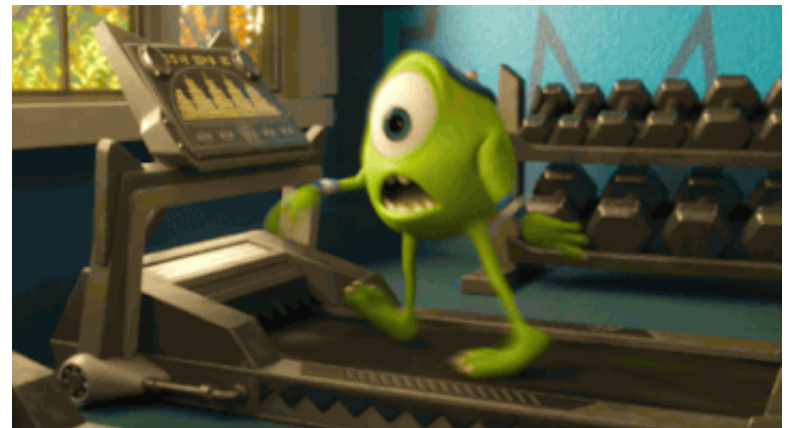
# FIVE KINDS OF **EXERCISE**

1. AEROBIC
2. ANAEROBIC
3. ISOMETRIC
4. ISOTONIC
5. ISOKINETIC



# AEROBIC EXERCISES

- Aerobic or cardiovascular exercise refers to exercise that involves or improves oxygen consumption by the body.
- Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy-generating process.
- Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. This intensity can vary from 50-80% of maximum heart rate.
  - Running
  - Swimming
  - Biking



# ANAEROBIC EXERCISES

Anaerobic exercise enhances power and builds muscle mass. Muscles trained under anaerobic conditions develop differently, leading to greater performance in short duration, high intensity activities, which last up to about 2 minutes.

- The most common form of anaerobic exercise is strength exercise.
- Strength exercise is the use of resistance to muscular contraction to build the strength, anaerobic endurance and size of skeletal muscles.
- There are many different methods of strength training, the most common of which are weight and resistance exercise.
- These two types of exercise use gravity (through weight stacks, plates or dumbbells) or machines to oppose muscle contraction, and the terms can be used interchangeably.

- Weight lifting
- Sprinting
- Jumping

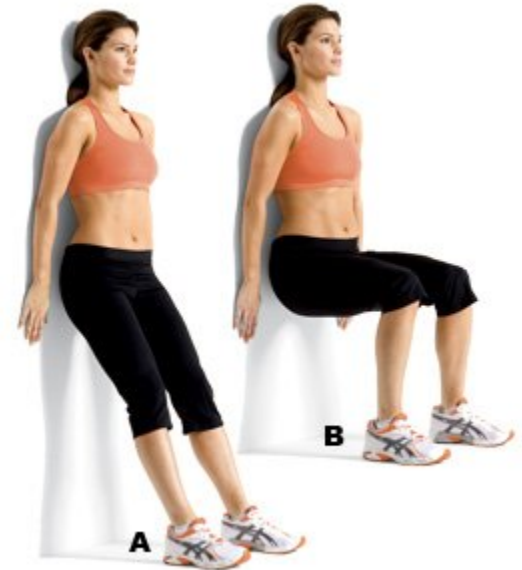


# AEROBIC vs ANAEROBIC

Aerobic (Presence of Oxygen)	Anaerobic (Absence of Oxygen)
Help to prevent or treat serious and life-threatening chronic conditions such as high blood pressure, obesity, heart disease, Type 2 diabetes, insomnia, and depression.	Appears to have continuous energy-burning effects that persist for about 24 hours after the training, though they do not offer the same cardiovascular benefits of aerobic exercises.
Both work to increase the mechanical efficiency of the heart by increasing cardiac volume (aerobic exercise), or myocardial thickness (strength training). Together they make for a well-balanced exercise program.	
Releases a lot of energy ( $\sim 2998$ jK)	Releases less energy ( $\sim 150$ kJ)
Produces CO <sub>2</sub> , H <sub>2</sub> O and energy	Produces Lactic acid and energy
Glucose completely broken down	Glucose NOT completely broken down

# ISOMETRIC EXERCISES

- **Isometric exercise** or isometrics are a type of strength training in which the joint angle and muscle length DO NOT change during contraction.
  - Wall sits
  - Plank holds
  - Overhead holds
  - Glute bridge





# ISOTONIC EXERCISES

- Isotonic comes from the Greek "iso-", equal + "tonos", tone = maintaining equal (muscle) tone.
- A contracting muscle maintains equal tone as it shortens against a constant load, as when lifting a weight. (Active)
- In contrast, with isometric exercise muscular contractions occur without movement of the involved parts of the body (Static)
  - Dumbbell press
  - Barbell press
  - Leg extension



# ISOKINETIC EXERCISES

- More specific than most other types of exercise. It allows specific control of resistance and, therefore, has much less potential for causing an injury.
- Isokinetic exercise is most commonly used in physical therapy, but it is gradually being used more by the general public or in physical therapy.
- Most isokinetic exercises use only bodyweight or very light weights.
  - Walking at a brisk pace
  - Slow Squats



# HOMework

- Design your own **nutritional** meal plan for a week. Be sure to list every day of the week and include at least 5 meals a day, and when you plan to have them.
- Design an **exercise** plan for a week. Please include the five types of exercises in your plan!
- Homework is due at the beginning of class on **Monday, January 29, 2018.**